

Simplifying Radicals Assignment

Write each expression in radical form.

1. $y^{\frac{4}{5}} =$

2. $(4c - 3)^{\frac{3}{4}} =$

Write each expression in exponential form.

3. $\sqrt[5]{x^2} =$

4. $\sqrt{(2 + a)} =$

Simplify the following expressions. Assume that all variables represent positive real numbers.

5. $\sqrt[4]{81} =$

6. $\sqrt{36a^6b^2} =$

7. $\sqrt{75} =$

8. $\sqrt[4]{\frac{48a^5}{b^8}} =$

9. $\sqrt[4]{162(3x + 5)^8} =$

10. $\frac{\sqrt{50x^6}}{\sqrt{2x^4}} =$

Simplify the following expressions. Assume that all variables represent positive real numbers.

11. $\frac{2}{\sqrt{6}} =$

12. $\frac{12}{\sqrt[3]{4}} =$

13. $\frac{3}{10 + \sqrt{5}} =$

14. $\frac{y - x}{\sqrt{y} - \sqrt{x}} =$

Simplifying Radicals Assignment

Simplify radicals and recognize like or unlike radicals.

15. $2\sqrt{3}; 3\sqrt{2};$

16. $3\sqrt{6}; \sqrt{24}$

17. $\sqrt[3]{250}; \sqrt[3]{54}; \sqrt[3]{16}$

18. $\sqrt[4]{2a^4b^9}; 6\sqrt[3]{2ab}; 3\sqrt[4]{2ab^5}$

Simplify the following expressions. Assume that all variables represent positive real numbers.

19. $(\sqrt[5]{-32})^2 =$

20. $\sqrt[5]{\sqrt{xy^3}} =$